

**THIRD YEAR MEDICAL STUDENTS' PERCEPTIONS OF THE "VALUES
IN HEALTHCARE" SELECTIVE MODULE ON THEIR MENTAL WELL-
BEING: A PILOT STUDY FROM SEFAKO MAKGATHO HEALTH
SCIENCES UNIVERSITY (SMU)**

By

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DECLARATION

I, the undersigned, hereby declare that the work contained in this assignment is my original work and that I have not previously submitted it, in its entirety or in part, at any university for a degree.

Date: March 2017

(Dr Y Tin Maung Maung)

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ABSTRACT

Mental wellbeing is of particular concern in medical students, who exhibit high rates of distress during their training which may persist throughout their careers. Since medical students are reluctant to seek care, a proactive approach to their well-being may be of benefit. This study examined the enhancement of the mental well-being of medical students by attending an intervention programme piloted in 2016 at Sefako Makgatho Health Sciences University.

“Values in Healthcare” (VIHASA) is a human development programme aimed at helping healthcare professionals reflect on their own values in their personal and professional lives. The programme was delivered to third-year medical students who chose to participate in the optional selective module, which consisted of small group sessions facilitated by trained individuals including the researcher. Students explored themes of inner values; peace; positivity; compassion; cooperation; valuing the self and spirituality in healthcare.

The aim of the study was to explore the extent to which the ‘Values in healthcare’ selective module intervention enhances mental well-being of medical students. The objectives of the study were to obtain a deeper understanding of the students’ experience of the module and how it related to their own mental well-being, and to provide recommendations with regard to future curriculum planning in terms of improving the mental well-being of medical students. The methods of the study include the following: to assess and compare the mental well-being of participants before and after the intervention using the quantitative Warwick-Edinburgh Mental Well-being Scale (WEMWBS); and to conduct focus group interviews after the intervention as a qualitative measure to explore the students’ experiences.

The eleven students differed in age, gender and home language. The WEMWBS score of all students improved after attending the module. Focus group discussions uncovered five major themes, namely perspectives about mental well-being; reasons for choosing the VIHASA module; experience of the module; self-awareness and recommendations. Both quantitative and qualitative results suggest an improvement in the mental well-being of participants. A key factor highlighted the extent to which the students’ awareness of the concepts of mental well-being, and in fact their awareness of their own mental well-being, increased.

This study is the first investigation involving medical students in the VIHASA programme. However, the study sample is small and possibly represents a particular type of student such as those who are interested in the field of well-being or proactive enough to act on the demands they

faced at medical school. A future study with a larger sample size is recommended and it may be worthwhile to investigate the persistence of results.

Beginning proactive mental health programmes early in medical training may ingrain well-being strategies, which may in turn reduce the frequency and severity of burnout and improve patient care. The VIHASA module is one such opportunity and this study provides the groundwork to consider its incorporation into the medical school curriculum.

OPSOMMING

Geestelike welstand is van besondere belang in mediese studente wat tydens hul opleiding hoë vlakke van angstigtheid toon, wat regdeur hul loopbane kan voortduur. Aangesien mediese studente huiwerig is om behandelings te verkry, mag 'n pro-aktiewe benadering tot hul welstand voordelig wees. Hierdie artikel ondersoek die verbetering van die geestelike welstand van mediese studente deur die bywoning van 'n ingrypingsprogram wat in 2016 by Sefako Makgatho Gesondheidswetenskappe Universiteit geloods is.

"Waardes in Gesondheidsorg: [’n Geestelike Benadering (WIGGB)]" is ’n menslike ontwikkelingsprogram wat daarop gemik is om professionele verskaffers van gesondheidsorg te help om hul eie waardes in hul persoonlike en professionele lewens te weerspieël. Die program is aangebied vir derdejaar mediese studente wat gekies het om deel te neem aan die opsionele selektiewe module wat bestaan uit kleingroepsessies gefasiliteer deur opgeleide individue, wat die die navorser ingesluit het. Studente het temas van innerlike waardes; vrede; positiewe; deernis; samewerking; waardering van die self en spiritualiteit in gesondheidsorg verken.

Die doel van die studie was om die mate te verken waarin die "Waardes in gesondheidsorg" selektiewe module ingryping, die geestelike welstand van mediese studente verbeter. Die doelwitte van die studie was om 'n dieper begrip te verkry van die studente se ervaring van die module en hoe dit verband hou met hul eie geestelike welsyn, en om aanbevelings te verskaf ten opsigte van toekomstige kurrikulum beplanning in terme van die verbetering van die geestelike welstand van mediese studente. Die metodes van die studie sluit die volgende in: om die geestelike welstand van die deelnemers voor- en na die intervensie met behulp van die kwantitatiewe Warwick-Edinburgh geestelike welstandskaal (WEGWS) te bepaal en te vergelyk; en om na afhandeling van die ingryping, fokusgroeponderhoude te voer as 'n kwalitatiewe maatstaf om ervarings van die studente se verken.

Die elf deelnemers het verskil in ouderdom, geslag en huistaal. Die WEGWS-tellings van al die studente het na bywoning van die module verbeter. Fokusgroeppesprekings het vyf groot temas uitgelig, naamlik perspektiewe oor geestelike welstand; redes vir die keuse van die WIGGB-module; ervaring van die module; selfbewustheid en aanbevelings. Beide kwantitatiewe- en kwalitatiewe resultate dui op 'n verbetering in die geestelike welstand van die deelnemers. 'n Belangrike faktor, wat die mate waarin die studente se bewustheid van die konsepte van

geestelike welstand, en in werklikheid hul bewustheid van hul eie geestelike welstand uitlig, is verhoog.

Hierdie studie is die eerste ondersoek waarby mediese studente in die WIGGB-program betrek is. Die studiemonster is egter klein en verteenwoordig moontlik 'n bepaalde soort student, soos dié wat belangstel in die gebied van welstand of proaktiewe genoeg is om teen die eise wat hulle op mediese skool ervaar op te tree. 'n Toekomstige studie met 'n groter steekproefgrootte word aanbeveel en dit kan die moeite werd om die konsekwente, voortdurende resultate te ondersoek.

Die proaktiewe daarstelling van geestesgesondheidsprogramme vroeg in die mediese opleiding kan help om welstandstrategieë te vestig, wat op hul beurt die frekwensie en erns van uitbranding kan verminder en pasiëntsorg kan verbeter. Die WIGGB-module is een so 'n geleentheid en hierdie studie verskaf die grondslag vir die oorweging van die insluiting hiervan in die mediese skool se kurrikulum.

CHAPTER 1

ORIENTATION OF THE STUDY

1.1 Introduction

Mental illness is among the top ten causes of disability worldwide and presents an enormous health burden, with the World Health Organisation estimating that 350 million people suffer from depression, one of the most common mental illnesses (WHO, 2016). Many of these people suffer silently since only a small minority receives treatment (WHO, 2001). This problem is of particular concern in low and middle income countries, where an estimated four out of five people suffering from serious mental illness do not receive mental health services (WHO, 2011) and most are reluctant to seek help due to stigma or lack of education and resources (Cable, 2014). These findings indicate that there is an urgent global need to implement mental health programmes, as well as programmes for the promotion of mental well-being. Mental health is defined by the WHO as “a state of well-being in which the person realizes and uses his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community” (WHO, 2014).

Although mental distress is a public health concern in the general population, the youth have been found to be affected more (Kumar, Shaheen, Rasool & Shafi, 2016). In particular, university students from the medical, engineering and social sciences disciplines showed a higher prevalence of psychological disorders compared to the general population (Kumar *et al.*, 2016). Most alarmingly are the medical students who exhibited more psychological distress than engineering and social science students (Kumar *et al.*, 2016). A systematic review by Dyrbye, Thomas and Shanafelt (2006) determined that globally, there is a high rate of psychological distress among medical students which continues throughout their training.

If not attended to during medical school, mental distress in students may lead to distressed physicians after graduation. The suicide rate among physicians is higher than in the general population (Schernhammer & Colditz, 2004). According to Drolet and Rodgers (2010), mental health programmes should start early in the training process in order to increase chances of preventing the decline in mental health often seen during medical school. Therefore, medical schools have a unique opportunity to safeguard the well-being of future physicians through mental health programmes and wellness curricula (Sobowale, Zhou, Fan, Liu & Sherer, 2014).

1.2 Background and Rationale of the study

South African medical students are not immune from the concerning levels of poor mental health (Naidoo, Van Wyk, Higgins-Opitz & Moodley, 2014). A high rate of psychological distress was found among first year medical students at the Sefako Makgatho Health Sciences University (SMU), previously known as University of Limpopo (Roe, 2014). Roe, an academic guardian of the first-year medical students, reported that about twenty per cent of students were identified as having psychosocial stressors in 2013 and 2014 (Roe, 2014). These stressors were either psychological, financial, academic or a combination of the above. The duty of the academic guardian is to interview students experiencing challenges in these different areas, in order to refer them to relevant services. Accordingly, a psychologist assists the students with emotional problems; the financial aid department helps with financial problems and the Center of Academic Excellence provides support for students with academic problems. This kind of student support system is a reactive approach which is also used in a number of medical schools in the US and Canada (Drolet and Rodgers, 2010). Although students were informed about this support system at the commencement of their medical training in SMU, no students presented voluntarily for assistance. Instead, the academic guardian called students when she noticed or was informed of their poor performance in one or more academic subjects.

According to Chew-Graham, Rogers and Yassin (2003), it is evident that medical students are reluctant to seek help. A proactive approach that promotes the well-being of students before they face a crisis is as effective as a reactive approach (Drolet & Rodgers, 2010) and may be even more effective (Yusoff & Esa, 2012; Cameron, 2016). Therefore, a proactive programme at SMU may be valuable for the well-being of medical students.

Until 2015, there was no such proactive support system for the MBChB (Bachelor of Medicine and Bachelor of Surgery) degree course offered at SMU, which is a six-year course to become a trained medical doctor (Sefako Makgatho Health Sciences University, 2015). In the curriculum of the third year of the degree, there are five major subjects and one selective module, all of which are credit bearing. The selective module is something different from the usual health science academic subjects. These selectives focus on skills development and could include modules as diverse as financial skills and piano playing. Facilitators of each selective indicate the number of students they can accept per academic year. Therefore, students choose and apply to one selective that they wish to attend.

The researcher was introduced to the 'Values in Healthcare' (VIHASA) programme by a co-worker and over the years became aware of the benefits of the programme, which focuses on the personal and team development of healthcare professionals. In 2015, the researcher prepared the VIHASA programme as a potential selective module in the third year medical curriculum, which was intended to serve as an intervention to enhance mental well-being of medical students. After obtaining permission from the selective programme leader, the new selective named 'Values in Healthcare' (VIHASA) was offered for the first time in 2016.

There were two reasons for offering this intervention programme in third year. First, it is the only year where a selective module is offered as part of the curriculum in SMU. Second, it is the transition year from pre-clinical to clinical study in which students are identified as more prone to have psychological distress (Dahlin & Runeson, 2007; Ludwig, Burton, Weingarten, Milan, Myers & Kliger, 2015). As a facilitator, it was important to be certain about the value of the intervention. The purpose of this study, therefore, is to assess the module's potential for enhancing the mental well-being of third year medical students.

1.3 Significance of the study

The VIHASA programme was introduced as a selective module in SMU for the first time in 2016. If the module was shown to be effective in enhancing the mental well-being of medical students, its extended implementation may be considered in the future. To date, there is no prior research on the influence of the VIHASA programme has on medical students that have participated globally. Therefore, there was a need to investigate whether the VIHASA programme, which was an intervention programme, could enhance the mental well-being of the medical students. Furthermore, the programme hoped to improve the mental well-being of medical students during their medical training, which may reduce the frequency and severity of burnout: "a measure of physical and psychological and mental distress catalysed primarily by occupational and professional demands" (Cecil, McHale, Hart & Laidlaw, 2014).

1.4 Research question

To what extent does the 'Values in healthcare' selective module enhance third-year medical students' mental well-being, if at all?

The aim of the study was to explore the extent to which the 'Values in healthcare' selective module enhances the mental well-being of medical students. The objectives of the study were to obtain a deeper understanding of the students' experience of the module and how it related to their own mental well-being; and to provide recommendations with regard to future curriculum planning in terms of improving the mental well-being of medical students. In order to measure the students' mental well-being, the methods used were to assess the students' baseline mental well-being prior to the module by using a validated assessment tool: The Warwick-Edinburgh Mental Well-being Scale (WEMWBS); to assess the students' final post-module mental well-being by using the same validated assessment tool (WEMWBS); to compare the baseline and final score of WEMWBS. In order to assess the extent at which the module enhanced students' mental well-being, the methods used were to conduct focus group interviews with the students after attending the selective module.

1.5 Research design

This was a mixed methods study, which used methods that generated both qualitative and the quantitative data sequentially. The quantitative data were obtained at two points in time: pre (before attending the selective module) and post (after attending the selective module), by using self-completed validated questionnaires of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). This pre and post intervention data were collected to observe any differences in mental well-being scores of attended participants. The qualitative data were generated from two focus group discussions, guided by preliminary questions (see Addendum 1). Therefore, WEMWBS questionnaire served as a measure of one's state of mental well-being in a numerical scale, whereas focus group discussions explored how the module enhanced students' mental well-being in their own words.

1.6 Research setting

The study was carried out in the school of Medicine at the Faculty of Health Sciences of the Sefako Makgatho Health Sciences University (SMU) in South Africa. SMU was established as a new and post-apartheid university (De Beer, 2015) by incorporating the Medunsa campus of the University of Limpopo in May 2014. The University became effective from January 2015 (Matlala, 2015). In 2015, there were total of 1521 medical students registered for all years of the MBChB

degree course (Moila, 2015). In 2016, 272 students were registered in MBChB third year. In the first three years of the programme, called the preclinical years, students learn basic science subjects. In the last three years, called the clinical years, they learn clinical subjects. Therefore, the third year is the time when students switch from basic science to clinical subjects and it is the only year that provides for one selective module. There are various selective choices such as driving lessons, swimming lessons, therapeutic horse riding, piano playing, financial skills, medical movies, electron microscopy, medical photography, cultural exchange, community volunteerism, mindfulness training, presentation skills, computer skills, choir, and values in healthcare (VIHASA). Out of the fifteen available slots in the VIHASA module, eleven students enrolled.

1.7 Report outline

Chapter One provides a brief overview of the study. In Chapter Two, the concepts of mental well-being and self-awareness are explored, in relation to mental distress among undergraduate students with regards to causes, consequences and coping strategies. The chapter presents teaching value based programmes in healthcare settings, focusing on the VIHASA programme and its effectiveness. Furthermore, discussion of the wellness programmes and their effectiveness in medical training are provided, as well as an in depth explanation of the context of the selective module of this study. Chapter Three presents the study methodology, including justification of the study design, data collection and analysis. The findings are presented in Chapter Four and a discussion of the findings in relation to the literature is explored in Chapter five. Finally, Chapter Six concludes the findings of the study and its practical implications, together with recommendations for future research.

CHAPTER 2

CONCEPTUALISATION AND CONTEXTUALISATION

This chapter draws on the body of scholarship and focuses on concepts of well-being with regards to mental health; concepts of self-awareness; mental distress among undergraduate medical students; teaching values based programmes in healthcare settings; and wellness intervention programmes in medical schools. In addition, the contexts of the selective module are presented.

2.1 Concepts of well-being regarding to mental health

It is common to see the term ‘well-being’ or ‘wellness’ used in society (Lefebvre, 2012), with organisations and authors describing it in different ways. Therefore, it is important to acknowledge that the concept of mental health can vary depending on the culture and context influences of each individual (World Health Organization, 2004).

In 1997, the American Medical Student Association defined wellness as “the complete integration of body, mind and spirit—the realization that everything we do, think, feel and believe has an effect on our state of well-being” (*Wellness resource guide for medical student*, 1997:6). Well-being also appeared in the definition of health by the World Health Organization as: “not merely the absence of disease or infirmity”, but rather, “a state of complete physical, mental and social well-being” (WHO, 2001:3).

More recently, Wallace, Lemaire and Ghali (2009) have described wellness as the complex multifaceted nature of physical, mental, and emotional health. According to Alcoe (2010), physical health is what we experience in our physical body and incorporates physical energy, activity and functioning, while mental health is how we think and use our mind regarding problem solving, decision-making and strategic thinking, and emotional health involves how we feel and manage the emotions. Alcoe further differentiates health as objective perceptions of our physical body, and well-being as more subjective about our feelings (Alcoe, 2010).

The American Medical Student Association (*Wellness resource guide for medical student*, 1997) suggests that wellness encompasses a whole person care, which involves the broader aspects of a person such as physical, emotional, social, intellectual, vocational and spiritual care. Holistic

care is arguably the ideal approach in health, as it places more emphasis in mental health (Parkes, Milner & Gilbert, 2010). According to the recent definition of mental health by WHO, “A state of well-being in which the person realizes and uses his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community” (World Health Organization, 2014).

It is clear that mental health should be viewed as an important component of a person’s wellness. According to Parkinson (2008:2),

Mental well-being relates to a person’s psychological functioning, life-satisfaction and ability to develop and maintain mutually benefiting relationships. Psychological wellbeing includes the ability to maintain a sense of autonomy, self-acceptance, personal growth, purpose in life and self-esteem. Staying mentally healthy is more than treating or preventing mental illness.

This statement was elaborated in the research review of the meaning of well-being by Ryan and Deci (2001), where well-being is differentiated into two concepts: hedonic (subjective experience of happiness and life satisfaction) and eudaimonic (positive functioning in life, self-realization and good relationships with others). For the purpose of this study, the definition of the mental well-being would be as above defined by Parkinson as the researcher draws on this particular understanding of mental health as a more integral part of a person’s general health than is currently the case.

2.2 Concepts of self-awareness

Another key concept which is closely related to mental well-being is self-awareness, “an individual’s tendency to pay attention to his or her own emotions, attitudes, and behaviour in response to specific situations” (Benbassat & Baumal, 2005:156). Cloninger (2006) notes that self-awareness requires an understanding of all aspects of a human being such as physical, mental, and spiritual. When people lack self-awareness, they act on their immediate likes and dislikes, which can be described as an immature or child-like ego state. Further, Cloninger (2006) argues that a person’s character development could bring about greater self-awareness, leading to greater happiness. His study revealed that people who were elevated on the three character traits of self-directedness, cooperativeness, and self-transcendence, had the highest percentage of happiness.

According to Cloninger (2006: 71), it is evident that

People can learn to flourish and to be more self-directed by becoming more calm, accepting their limitations, and letting go of their fears and conflicts. People can learn to be more cooperative by increasing in mindfulness and working in the service of others. In addition, people can learn to be more self-transcendent by growing in self-awareness of the perspectives that lead to beliefs and assumptions about life, which produce negative emotions and limit the experience of positive emotions.

The development of well-being is dependent on a combination of all three aspects of self-awareness and the absence of any one of these aspects lead to vulnerability to mental ill-health. Therefore, it is important to develop all of these three character traits in order to improve mental well-being.

The literature reports some measure of teaching of self-awareness in medical education in order to assist students to have insight into their own feelings and attitudes to patient care (Benbassat & Bauml, 2005). This is supported in a later study by Ahrweiler, Scheffer, Roling, Goldblatt, Hahn and Neumann (2014), who reported that medical students need support in dealing with their own feelings and attitudes, in the form of reflective practice training for promotion of self-awareness.

Benbassat and Bauml (2005) described two approaches of teaching self-awareness in medical education: direct and indirect. In direct teaching, students' recognition of their emotional responses and attitudes that arise in various stressful situations are discussed in a small group discussion; whereas in indirect teaching, students reflect their emotional responses and attitudes through the perception of others such as their instructors, peers or patients. Both self-awareness teaching approaches are considered to be effective and there is no evidence that supports the superiority of one approach over another.

However, Saunders, Tractenberg, Chaterji, Amri, Harazduk, Gordon, Lumpkin and Haramati (2007) argues that the promotion of self-awareness in medical education is still in its infancy due to the lack of available resources for teaching and the challenging nature of its assessment. Although many studies describe the training of self-awareness, which focuses on medical students' self-awareness relating to patient care, there is a scarcity of research on the promotion of self-awareness regarding the mental well-being of the medical students themselves. This study, with its investigation of an intervention programme, may provide great value for the promotion of self-awareness in medical students and hence the improvement of their mental well-being.

2.3 Mental distress among undergraduate medical students

Medical schools aim to train graduates for a personally rewarding and socially meaningful career, in addition to promoting health and care for the sick (Dyrbye *et al.*, 2006). The training curricula and programmes at medical schools are of high standards and students are expected to have high levels of motivation, intelligence and stamina (Cuttilan, Sayampanathan & Chun-Man Ho, 2016). Several decades of literature shows that the high expectations, demanding academic pressures and competitive learning environment of medical school is related to a high frequency of mental distress among students (Shapiro, Shapiro & Schwartz, 2000; Yusoff & Esa, 2012; Noori, Blood, Meleca, Kennedy & Sengupta, n.d.).

Dyrbye *et al.* (2006) systematically reviewed 40 articles on the psychological distress of medical students which indicated a high prevalence of depression and anxiety. Worldwide, the prevalence of psychological distress among medical students was higher than the general population and their age-matched peers (Dyrbye *et al.*, 2006; Wallace, Masiak & Pabis, 2013). Additionally, studies suggest that mental health deteriorates after students commenced their studies at medical school and this deterioration continues throughout their training (Dyrbye, Thomas & Shanafelt, 2005). This finding is supported by a systematic review of studies from 2000 to 2015 in medical schools across Asia (Cuttilan *et al.*, 2016). The review found that mental health issues affected a significant proportion of medical students in Asia. The evidence clearly points to medical students' struggles with mental health issues throughout their training.

2.3.1 Causes of mental distress

There are various factors which contribute to the decline of the mental health of medical students. Typically, these factors differ from year to year during their medical study. In the first year of medical school, the challenges seem to be more about adapting to a new and demanding learning environment and being away from family and friends (Dyrbye *et al.*, 2005; Saravanan & Wilks, 2014). In the clinical years, challenging factors include separation from their peer-support group as they frequently have to rotate to new work environments, as well as from facing issues of death and dying for the first time (Dyrbye *et al.*, 2005; Wallace *et al.*, 2013). Though many studies identified various factors that caused stress in different years of medical training, Nazeer and Sultana (2014) reported that stress is not related to any particular year.

In general, the most common stressors were due to academic and psychosocial pressures (Sreeramareddy, Shankar, Binu, Mukhopadhyay, Ray & Menezes, 2007; Shah, Hasan, Malik & Sreeramareddy, 2010). In a study done by Sreeramareddy *et al.* (2007) in Nepal, students rated

the main academic pressures as dissatisfaction with the class lectures; vastness of the academic curriculum; frequency of examinations; and performance in the examinations. In the same study, it was found that certain psychosocial factors contributed to psychological morbidity. These factors included the quality of food in campus cafeterias; high parental expectation; lack of entertainment; feelings of loneliness; and worrying about the future. In addition, Dyrbye *et al.* (2005) discovered that interpersonal interactions between students and people in their training environment, such as nurses, interns and lecturers, were a potential cause of students' distress. It is clear that medical students under training go through a stressful and demanding period in a competitive environment with multiple responsibilities (Pereira and Barbosa, 2013). Table 1 provides a summary of common stressors and examples of contributing factors in undergraduate medical students.

Table 1. Common stressors and their contributing factors in undergraduate medical students

Most common stressors	Examples of contributing factors
commencement year of medical school	adapting to a new and demanding learning environment
academic pressures	dissatisfaction with the class lectures; vastness of academic curriculum; frequency of examinations; performance in the examinations
psychosocial pressures	quality of food in campus cafeterias; high parental expectation; lack of entertainment; feelings of loneliness; worrying about the future
new various work environments	separation from their peer-support group; facing issues of the death and dying of patients for the first time; interpersonal interactions between students and people in their training environment

(Adapted from: Dyrbye *et al.*, 2005; Sreeramareddy *et al.*, 2007; Shah *et al.*, 2010; Wallace *et al.*, 2013; Saravanan & Wilks, 2014)

2.3.2 Consequences of mental distress

Studies suggest that the mental distress of medical students negatively affects the students on a personal level, as well as on a professional level (Dyrbye *et al.*, 2005; Cuttlan *et al.*, 2016). Although stress is inevitable and may be necessary to stimulate learning, continuous stress in the life of an undergraduate medical student may lead to burn-out. Burn-out is described as “a syndrome of emotional exhaustion, and reduced personal accomplishment that may develop when there is significant stress without adequate support and resources in the face of work overload, as commonly happens with physicians and undergraduate medical students” (Bera, Mandal, Bhattacharya, Biswas, Ghosh & Bera, 2013:356). Students react to stress and burn-out differently depending on the coping mechanisms they use.

2.3.3 Coping strategies used by medical students

Students use various coping strategies to overcome their mental distress. These include engagement strategies such as problem-solving, positive interpretation, expression of emotions, and reliance on social support; and disengagement strategies such as problem avoidance, social isolation and self-criticism (Naidoo *et al.*, 2014). In one study, Dyrbye *et al.* (2005) reported that students could reduce their mental distress by using engagement strategies. However, disengagement strategies may lead to poor mental health. Some examples of undesirable effects of the coping mechanisms are impairment of academic performance, social isolation, cynicism, substance abuse and mental illnesses.

Alarming, there is a strong association found between students' burn-out and suicidal ideation, which is a well-established predictor of suicidal planning and attempts (Dyrbye, Thomas, Stanford Massie, Power, Eacker, Harper, Durning, Moutier, Szydlo, Novotny, Sloan & Shanafelt, 2008). Therefore, it is absolutely essential to promote and nurture well-being during medical school training in order to prevent mental illness. In this way, graduates can be equipped with the necessary skills to recognize their personal distress, to determine when they need to seek assistance, and to develop strategies to promote their own well-being (Dyrbye *et al.*, 2005; Naidoo *et al.*, 2014).

2.4 Teaching values based programmes in healthcare settings

Values are defined as core beliefs which people use as a way of providing principles to live (Sladden, 2006). These principles include compassion, kindness, practicality, dependability,

integrity, humour, honesty and many more (Sladden, 2006). Not knowing or forgetting one's own values can be meaningless to life purposes, resulting in loss of one's self-esteem (Bendmir & Morrison, 2005). It is widely known in the Hippocratic Oath that values are emphasised to the medical professionals (Brown, 2003). Similarly, Eagger, Desser and Brown (2005) reported that all other medical professional organizations have statements which refer to values in their codes of practice. It has been argued that a profession which has no values is worthless (Clever, 1999).

The evidence suggests that there has been a dramatic decline in the morale of healthcare professionals because they felt as though they were not being valued (Brown, 2003). This led to the British Medical Association to call for a summit in 1994, on 'Core values for the medical profession' to re-evaluate, redefine and restate core values. The summit acknowledged values as the profession's greatest assets, even above scientific knowledge and technology (Brown, 2003). In 1999, Clever, in her position as the chair of the Department of Occupational Health in San Francisco, published an article to call for a renewal of one's values as a way to begin a new century for physicians. Her initiative became so powerful that there was a re-emergence of publications concerning the professional values of the medical professions (Pendleton & King, 2002). Similarly, in the United States, the Ad Hoc Committee of Deans called for the medical educational system to take into account 'the health and well-being of the learners' as part of the vision for improving medical education, in the report of Association of American Medical Colleges, 2004 (Peskin, 2006).

Traditionally, the training of healthcare professionals focuses on knowledge gain with proficiency in practical skills, resulting in little time for self-care and reflection (Brown, 2003; Parkes *et al.*, 2010). There was a need for the educational programme to support and develop the personal well-being of healthcare professionals (Eagger *et al.*, 2005). Furthermore, there has been limited literature in promoting the education and training of healthcare professionals as a means to understand their own spirituality and values (Bendmir & Morrison, 2005). Therefore, it is important to explore the potential of this kind of programmes to be conducted and evaluated with the view of informing further development in this area.

2.5 Values in healthcare programme

The VIHASA training package was developed by a group of various healthcare workers from The Janki Foundation for Global Health Care and was launched in 2004 (Bendmir & Morrison, 2005;

Parkes *et al.*, 2010). The purpose of the training package is positive human development and whole-person care for all healthcare professionals (Bendmir & Morrison, 2005). It also provides personal opportunities for students to re-affirm their self-esteem and sense of purpose; focus on the renewal of enthusiasm and vitality; enhance their skills in self-care; cope better with stress and ill health; and prevent burnout (Bendmir & Morrison, 2005).

VIHASA's aims are to assist healthcare professionals to rediscover their own values and develop ways to reflect them in their professional and personal lives (Parkes *et al.*, 2010). It is based on three key principles: physician heal thyself, learning from experiences and relevance to work. The first principle emphasises the caring for the self and personal development so as to raise morale and restore a sense of purposes of healthcare professionals (Bendmir & Morrison, 2005). The second principle states that values are best learned through direct experience; therefore, the teaching style to be used in this programme is facilitation rather than didactic instruction (Brown, 2003; Bendmir & Morrison, 2005). Thirdly, learning experience should be relevant in a participant's personal life as well as work environment, so as to highlight factors such as reflection, action planning, evaluation and a dedication to ongoing learning (Bendmir & Morrison, 2005).

VIHASA has been delivered to healthcare professionals in many countries around the world including the UK, Brazil, Israel, US, Mauritius, Kenya and India (Eagger *et al.*, 2005). According to Eagger *et al.* (2005), there has been a significant increase in hospital and community-based healthcare practitioners who made use of this material in their continuing professional development programmes in the UK. In one study, Sladden (2006) reported that the healthcare workers who had undergone the programme showed an improvement on self-reported worth and well-being afterwards. In New York, the feedback from staff and managers pointed out that the programme was calming, thought provoking, challenging, stimulating and engaging (The Janki Foundation for Global Healthcare, 2009). Although it is evident that VIHASA programme has been well received by healthcare workers, it is of value to investigate the perceptions of medical students regarding the effects of this programme on their mental well-being.

2.6 Wellness (intervention) programmes in medical schools

Since there has been a growing emphasis on wellness in medical education globally, many medical schools have designed and implemented intervention programmes (Ludwig *et al.*, 2015). Some studies support that interventions during an undergraduate medical training can lower the

stress levels (Pereira and Barbosa, 2013) and mental health prevalence rate in medical students (Cuttilan *et al.*, 2016).

2.6.1 Proactive programmes

Although there has been a great variety of health promotion programmes offered in medical schools over the last decade, only one systematic review of stress-management programmes was performed, which had wide inclusion criteria such as medical students, residents, nurses and premedical students (Shapiro *et al.*, 2000). However, there were some concerns with this review: it had not been updated; there was a lack of standardization of outcome measures across these studies; the studies did not assess the long-term effects of interventions; and most interventions were conducted at one site (Shiralkar, Harris, Eddins-Folensbee & Coverdale, 2013). Similarly, a study done by Ludwig *et al.* (2015) agreed that the evaluation of the effects of the interventions were not done. Therefore, in 2013 Shiralkar *et al.* conducted another systematic review of stress-management programmes for medical students only. In their systematic review, Shiralkar *et al.* (2013) reported that although there was only a small number of a controlled studies and data limitation, there was a role for stress-management programmes in reducing the psychological distress of medical students.

2.6.2 Effectiveness (including duration) of proactive programmes

One randomised controlled study investigated the effects of an intervention of a seven-week Mindfulness-Based Stress Reduction (MBSR) programme on mental distress, study stress, burnout, subjective well-being, and mindfulness on medical and psychological students (De Vibe, Solhaug, Tyssen, Friborg, Rosenvinge, Sørli & Bjørndal, 2013). In their study De Vibe *et al.* (2013) showed that significant positive effects of mindfulness were found only on female students. However, this study predicted that this MBSR programme of mindfulness practice may have helped male students to become more aware of their distress. The study on an intervention course of anxiety and stress reduction on medical students by Finkelstein, Brownstein, Scott and Lan (2007) reported that the intervention decreased anxiety levels and the effects lasted for 3 months after the course. In addition, student-led stress management programme for first year medical students study by Redwood and Pollak (2007) concluded that the programme had been successful. Ludwig *et al.* (2015) argued that many of these innovative new programmes targeted small selected groups of students and their relevance to the entire population of medical students is unclear.

The duration of these programmes varies from 60 minutes to 32 hours over 16 weeks (Yusoff & Esa, 2012). Though one meta-analysis suggested that beneficial psychological effects of intervention were only found if the duration was no more than 8 weeks (Yusoff, 2014), there is scarcity of research which investigates optimal duration and frequency of such programmes to produce personal and professional development effects on medical students. However, since these global trends of proactive programmes are not explored in the curriculum of SMU, it could be of benefit in exploring the potential of such programme in the context of medical students in SMU.

2.7 The selective module

The following section describes the VIHASA selective module according to its structure, content, learning tools used and assessment methods.

2.7.1 Structure of module

The whole package of the VIHASA module was offered for the first time in SMU, 2016. It was facilitated by the researcher who was also the module coordinator, and three volunteer facilitators from the Values in Healthcare association of South Africa.¹ There was a total of eight sessions: each session lasted for four hours per week, on consecutive or alternate Fridays from the month of February to May in 2016. Although the total time for each session is approximately 6 hours and 30 minutes in a typical VIHASA programme (Eagger, 2004), the researcher adjusted the time to 4 hours and some of the self-reflection and meditation/ visualization exercises were given as homework (see Addendum 2). The adjustment of the programme is allowed depending on the needs of the group and group size, but not to the extent that the students missed the opportunities for deep self-reflection. The adjustment of duration for each session was shortened in SMU due to the availability of venue and allocated time of the selective module. Each session began with an introduction to the theme, followed by a structured programme of various activities (see Addendum 2). Students engaged in these activities either individually or in a group of three to four depending on the guided instruction during these sessions. From the very first session of the module, students were given a meditation calendar, a guided meditation CD and a diary. After

¹ www.jankifoundation.org

each session, students were reminded to meditate in their own free time using the guided meditation CD and to write down their experiences of each session in the diary. In addition, students were given homework if they did not finish the modular work in the scheduled session time.

2.7.2 Content and Techniques of module

The facilitators used a comprehensive and flexible modular training package (*Values in Healthcare: a spiritual approach*, 2011) as discussed earlier. This module consisted of a total of eight sessions: one introductory session and seven other sessions, namely Inner Values, Peace, Positivity, Compassion, Co-operation, Valuing yourself and Spirituality in healthcare (Bendmir & Morrison, 2005) (see addendum 3). The VIHASA learning tools used were meditation, visualisation, reflection, listening, appreciation, creativity and playfulness (see Addendum 4).

2.7.3 Assessment methods used in the module

Both formative and summative assessment methods were used in this module. Formative assessment contributed to the 60% of the final mark whereas summative assessment contributed the remaining 40% of the final mark (see Addendum 5).

2.8 Conclusion

When exploring the concept of well-being, the importance of a whole person care or holistic wellness needs to be emphasised. Although physical, mental and social health are all closely related and interdependent, it is clear on deeper investigation that mental health is the major component of a person's overall well-being. Mental well-being covers both a hedonic concept, which is the subjective experience of happiness and life satisfaction, and a eudaimonic concept, which is the positive functioning in life, self-realization and good relationships with others. Another important concept which relates closely to mental well-being is self-awareness. For a person to be self-aware, he or she can learn to develop three character traits, namely self-directedness, cooperativeness, and self-transcendence. When all of these three character traits are heightened, a person is more self-aware, and better able to attain mental well-being.

Globally, the mental distress of medical students has been in the spotlight in medical education for several years. Many studies (Dyrbye *et al.*, 2005; Dyrbye *et al.*, 2006; Dyrbye *et al.*, 2008; Bera *et al.*, 2013; Naidoo *et al.*, 2014; Cuttlan *et al.*, 2016) have investigated the causes and

consequences of mental distress and coping strategies used by medical students. Some of these studies revealed students' lack of awareness of positive coping strategies, which eventually led to their mental health to be compromised (Vawda, 2003; Dyrbye *et al.*, 2005). There is a call for wellness interventions in medical education which could serve as a proactive programme for the prevention of mental illnesses in medical students. Although there were many proactive programmes delivered in medical schools, they had varying aspects of effectiveness. Out of all these programmes, a valued-based teaching programme such as VIHASA was found to be effective as a personal and team development programme for healthcare workers worldwide. Therefore, a VIHASA programme is delivered to the third year medical students for the first time in SMU as a selective module, with the intention that the module would serve as a proactive programme. Given the clear need for an effective intervention, it is important to explore students' perceptions of the VIHASA selective module as to whether or not it enhances their mental well-being.

CHAPTER 3

METHODOLOGY

This chapter presents the research methodology that was adopted to achieve the study aim and objectives. It includes the study design, location, population and sampling, data collection process and instruments used, data analysis procedures, discussion of issues relating to trustworthiness, and ethical considerations.

3.1 Aim, objectives and research question of the study

The aim of this study was to explore the extent to which the 'Values in healthcare' selective module intervention enhances mental well-being of medical students. The objectives of the study were to obtain a deeper understanding of the students' experience of the module and how it related to their own mental well-being, and to provide recommendations with regard to future curriculum planning in terms of improving the mental well-being of medical students.

The methods of the study used are the following:

- To assess the baseline (before intervention) mental well-being of the medical students by using a validated assessment tool, the Warwick-Edinburgh Mental Well-being Scale (WEMWBS)
- To assess the final (after intervention) mental well-being of the medical students by using the WEMWBS
- To compare the baseline and final score of the WEMWBS
- To conduct focus group interviews with the medical students after they attended the selective module

The study is based on the following research question: To what extent does the 'Values in healthcare' selective module enhance medical students' mental well-being, if at all?

3.2 Study design

The study design is based on a mixed method of sequential qualitative and quantitative methods. “Mixed methods research is defined as a procedure for collecting, analysing and ‘mixing’ both quantitative and qualitative data at some stage of the research process within a single study to understand a research problem more completely” (Maree, 2007a:269). Focus group discussions (FGDs) were used in order to explore the extent in which the module enhanced participants’ mental well-being in the qualitative component, whereas WEMWBS questionnaires were used to obtain systematic and measurable data about the subjective well-being and psychological functioning of the participants in the quantitative component of the study.

3.3 Study location

The study was conducted at the skill centre, Sefako Makgatho Health Sciences University (SMU) in Pretoria, South Africa. The location was chosen due to its availability and suitability for both the intervention and interviews.

3.4 Study population and sampling

All third year medical students at SMU select a module in a subject that is unrelated to their academic subjects. The medical students at SMU were invited to enrol in the selective module named ‘Values in Healthcare’ (VIHASA) and the study population comprised those students who chose VIHASA as their selective module. Selected participants were recruited in the study according to their willingness to participate and share information about their experiences.

Convenience sampling was used in this small-scale investigation. This approach enhances feasibility and facilitates the completion of a small-scale study. Therefore, the criteria for all participants included being third year medical students who had attended the VIHASA module. A total of 11 students attended the module and all of them volunteered to participate in this study.

3.5 Data collection

3.5.1 Details of the focus group discussions

The rationale for using focus group discussions was to gather rich information from different participants, in order to elicit a multiplicity of views and emotional experiences, as well as information within the context of the group (Stalmeijer, Mcnaughton & Van Mook, 2014). There were two focus groups; the first group contained six participants and the second group contained five. The participants were randomly allocated to different focus groups and both groups included men and women. The group size was large enough to allow for varying opinions and perspectives (Côté-Arsenault & Morrison-Beedy, 2005; Krueger & Casey, 2009).

An independent focus group interviewer was appointed and trained by the researcher at the start of the study. Focus group discussions were conducted at two and three weeks after the final session of the VIHASA selective. They took place in a seminar room at the skills center of SMU, which was free from noise and distractions. The participants were seated around a rectangular table, which encouraged eye contact and interaction among participants. The researcher introduced the independent focus group interviewer to the group participants at the beginning of each FGD and thereafter left the discussion room. The interviewer used preliminary questions (see Addendum 1) as a guideline in FGDs. These preliminary questions, which would serve as interview schedules, were developed by the researcher based on the objectives of the study.

The researcher simplified the questions in order to obtain an adequate response from the participants. Prior to using these preliminary questions in the FGDs, the questions were also tested among other students not involved in the module, in order to ensure that these questions were clear to the participants. All participants were encouraged to respond freely and express their views and feelings on all questions. Because the interviewer was an experienced researcher with a nursing background in mental health, she was skilled in exploring the psychological issues that emerged from the discussions. The FGDs lasted between 50 and 55 minutes. They were audio recorded, transcribed verbatim and stored on the researcher's personal computer.

3.5.2 Details of the questionnaire

The WEMWBS questionnaire (see Addendum 6) was the preferred tool to assess mental well-being of the medical students for three reasons. First, it enables researchers to measure the mental well-being of university students in particular, as it was developed and validated in University students of Warwick and Edinburgh. Second, the participants of previous studies

evaluated the scale and determined that it was clear, unambiguous and easy to complete. Third, the scale is suitable for monitoring mental well-being in population samples, since the population scores on WEMWBS approximate to a normal distribution with no ceiling or floor effects (Parkinson, 2008). Though the validity of the WEMWBS questionnaire was not done in the South African context, the usage of WEMWBS questionnaire was simply to complement the qualitative data.

Participants were required to answer the WEMWBS questionnaire in a self-completion paper format before they attended the first session of the VIHASA module. They completed the same WEMWBS questionnaire two weeks after completing the final session of the VIHASA selective but a few days before the focus group discussions. The participants answered all 14 items of the WEMWBS. Each of the 14 items is answered on a 1 to 5 Likert scale, with 1 meaning none of the time and 5 meaning all of the time. The minimum score is 14 and the maximum is 70 (Parkinson, 2008).

For confidentiality, each participant was given an identification number and his or her total scores were captured twice using Microsoft Excel. The data was cross checked manually prior to data analysis and no error was found.

3.6 Data analysis procedures

3.6.1 Qualitative data

According to Ramani and Mann (2016:5), qualitative studies result in “large volumes of narrative data that need to be systematically transcribed, read, sorted and interpreted through a process of content analysis.” The audio recordings of FGDs were transcribed verbatim by a professional transcriber. The transcripts were then analysed by the researcher and a co-coder, following a series of steps. Firstly, significant quotes from the raw data were highlighted and coded. Saldana (2009:3) explains a code as “a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/ or evocative attribute for a portion of language-based or visual data.” Thereafter, codes similar in context were grouped into basic themes. Ramani and Mann (2016:5) define themes as “key concepts that adequately and appropriately capture the meaning of the experience from the perspective of the participants as well as researcher interpretations and overlap multiple categories.” Basic themes were compared and contrasted, and finally categorized into different organizing themes (Attride-Stirling, 2001; Ramani & Mann, 2016).

Finally, major themes were identified through this process, which summarized the main claim (Attride-Stirling, 2001).

This form of iterative data analysis “the process which researcher continuously re-examine the data using insights that emerged during the analysis” (Frambach, Van der Vleuten & Durning, 2013:552), was performed using paper and pencil on hard copies of data and formatted with basic word-processing software. Electronic coding software was not used as this was a small-scale study.

3.6.2 Quantitative data

Maree (2007b:145) defines quantitative research as “a process that is systematic and objective in its ways of using numerical data from only a selected subgroup of a universe (or population) to generalize the findings to the universe that is being studied.” The quantitative data used in this study was generated from the WEMWBS, a 14-item mental well-being scale that covers subjective well-being and psychological functioning (Parkinson, 2008). All items are worded positively and they address various aspects of positive mental health (Parkinson, 2008).

The total WEMWBS result of each individual participant was calculated by adding all the 14 item scores. The baseline WEMWBS result measured the mental well-being score of each participant before attending the module and the final WEMWBS result was measured after attending the module. These data were analyzed by using Microsoft Excel 2013 for calculation and the creation of graphs. The baseline and final scores were compared for individual participants.

3.7 Trustworthiness

“Trustworthiness refers to the way in which the inquirer is able to persuade the audience that the findings in the study are worth paying attention to and that the research is of high quality” (Maree, 2007c: 305). Since this study applied mixed methods of research, trustworthiness of data is important in both the quantitative and qualitative processes. Dependability, credibility, transferability, confirmability, validity and bias were considered and used for assessing the trustworthiness of the study.

3.7.1 Dependability

“Dependability is the extent to which the findings are consistent in relation to the contexts in which they were generated” (Stalmeijer *et al.*, 2014:937). The researcher aimed to achieve this by using an iterative data analysis process as she continuously re-examined the data using insights that emerged during analysis.

3.7.2 Credibility

Stalmeijer *et al.* (2014) describe credibility as the extent to which the study’s findings are trustworthy and believable to others. Credibility was ensured by appointing an experienced skilled interviewer for the FGDs and by testing the preliminary questions on other students not involved in the study. In addition, the researcher asked participants for feedback on the data and its interpretation.

3.7.3 Transferability

Transferability of a study is determined by the extent to which the findings can be applied in different settings (Stalmeijer *et al.*, 2014; Ramani & Mann, 2016). Since the study was conducted in a Faculty of Health Science during a voluntary selective module, it is difficult to specify transferability of the study findings across the medical student population. However, the reader is provided with sufficient information to assess transferability.

3.7.4 Confirmability

Confirmability refers to the extent to which the findings are based on the study’s participants and settings instead of the biases of the researcher (Stalmeijer *et al.*, 2014). To this end the researcher made a disclosure of the relationship between herself and the participants. Confirmability was also ensured by appointing an independent interviewer who was not involved in facilitating the module, as well as by asking an independent co-coder to code the data. In addition, the data and interpretation were derived solely from the participants and both were checked by the participants and the interviewer.

3.7.5 Validity

According to Maree (2007d:216), “a measure or instrument is said to be valid if it measures what it is supposed to measure.” The validity of WEMWBS questionnaire in this study was not done in the South African context but the researcher used it more broadly to support the qualitative data without making any claim on its own.

3.7.6 Objectivity

Frambach *et al.* (2013:552) explain objectivity as “the extent to which personal biases are removed and value free information is gathered.” In this study, interviewer bias was reduced by employing an independent interviewer for FGDs. There was no selection bias as participants were all third-year medical students who attended the selective module. As the participants were anonymised in the study, their personal bias was also removed.

3.8 Ethical consideration

3.8.1 Permission

Ethical clearance was obtained from Health Research Ethics Committees (HREC), Faculty of Medicine and Health Sciences, Stellenbosch University (Ethics Reference #: S15/10/241) where the researcher is studying towards a MPhil in Health Professions Education (see Addendum 7). Similarly, permission to conduct the study at the Sefako Makgatho Health Sciences University (SMU) was obtained from SMU Research Ethics Committee (SMUREC) (see Addendum 8). It was not necessary to obtain approval from the Department of Education (DOE) as approval from SMUREC had been obtained. Permission to use the WEMWBS questionnaire developed by the University of Warwick was also obtained (see Addendum 9).

3.8.2 Informed consent

The participants received a verbal explanation and information leaflets to ensure a clear understanding of the aim of the study. They were required to sign the consent forms and informed that there would be no penalty if they declined or withdrew participation any stage (see Addendum 10).

3.8.3 Confidentiality

Unique identification numbers were used in order to preserve the confidentiality of participant details and responses. The rights of confidentiality in FGDs were exercised throughout the study.

3.8.4 Access to findings

The findings of the study will be made available to the participants, the curriculum development committee of SMU and any other parties who may express an interest in the results.

CHAPTER 4

FINDINGS

This chapter presents the study findings, focusing on the potential of the VIHASA selective module to enhance mental well-being in medical students. The findings are structured as follows: (i) the demographics of the participants; (ii) two focus group discussions; and (iii) WEMWBS of participants before and after attending the module. The focus group discussions were transcribed verbatim and then subjected to thematic data analysis. The summary of themes and sub-themes that emerged are presented. For quantitative data, the comparison of total WEMWBS of each participant before and after attending the module, as well as their mean scores, are explained and illustrated in Table 8 and Figure 1.

4.1 Demographics of participants

Profiles of the participants were classified in terms of age, gender and home languages. These information were obtained from the application forms of the selective module. All participants are third year medical students at SMU and none of them are repeating their third year. A total of eleven participants were selected, age range 19 to 28; four male, seven female; four Sepedi, two Afrikaans, one each Siswati, Venda, IsiXhosa, Xitsonga, English first language speakers.

4.2 Focus group discussions

Two focus group discussions (FGD) were conducted at the skill center, as described in Chapter 3. Focus group 1 lasted about fifty-five minutes and was conducted on 15 June 2016. Focus group 2 was conducted on 23 June 2016 and lasted about fifty-three minutes. There were five major themes that emerged from the analysis of both FGDs and four out of five were further divided into two sub-themes (Table 2).

Table 2. Table of major themes and sub-themes

MAJOR THEMES	SUB THEMES
Perspectives about mental well-being	Understanding of mental well-being
	Ways to achieve mental well-being
Reasons for choosing the VIHASA module	
Experiences of the module	Positive experiences
	Negative experiences
Self-awareness	Before the module
	After the module
Recommendations	Duration of a session
	Which year to implement the module

4.2.1 Major Theme 1: Perspectives about mental well-being

Under the major theme of mental well-being, two sub-themes emerged from the data: understanding mental well-being and ways to achieve mental well-being. Participants explained what they understood about mental well-being and how to achieve mental well-being (see Table 3).

Table 3. Table of major theme 1 and sub-themes

No.	Theme	Sub-themes	Descriptions of sub-theme	Quotations
1	Perspectives about mental well-being	Understanding of mental well-being	Being able to solve the problem without being disturbed mentally	<i>"What I understand ... having a stress-free mind. Even if something happens you are able to deal with whatever you have encountered without disturbing other activities, your daily activities. That's what's mental health." (Participant 10)</i>
			Being at peace and being self-aware	<i>"I think it is the state of your mind. The acceptance and [unclear] to accept whatever that you have. Being at peace like she said. And just aware of yourself. No stress, everything is functioning. It's a balance." (Participant 4)</i> <i>"And to add on to what she was saying, I think it's more about being at peace with yourself, you know." (Participant 3)</i>
			Being 'pure in mind' without worries or stresses	<i>"OK on my side I think, just a state of being pure in your mind. Not worrying about anything or... like, being confident about yourself. Knowing that you can do everything. And you have this inner peace in your</i>

				<i>mind. Don't stress about anything or worry, or...ja. It's like... no depression." (Participant 11)</i>
			Being optimistic about life and oneself	<i>"Having a positive outlook on life. Being happy with yourself." (Participant 2)</i>
			Not only absence of illness but how balance the state of mind	<i>"Well I think it's personally it's any well-being. But if we go specifically to mental well-being, it's not just the absence of a pathology or issues. Not necessarily pathology or hang-ups, stresses, or whatever it may be. But also the presence of positive things. Um... a good state of mind, a healthy state of mind. I think a balanced life contributes a lot to that. So, ja, that's what I think." (Participant 6)</i>
	Ways to achieve mental well-being		Cope with situations and able to get back to a prior state of mind	<i>"mental health is learning to deal with situations. Learning to cope with any situation that is thrown at you. And having a mechanism for you to recharge after everything that's done for the day or whatever you may encounter." (Participant 1)</i>
			Accept the problems and find the solution	<i>"if you have stress you are able to deal with it. You accept it and you find solutions to whatever is troubling you." (Participant 4)</i>

			Handle stressful situations in constructive ways	<i>"I think mental well-being, it's peace of mind. It's just, you know how to deal with stressful situations in a positive way. Ja. I just believe that there are different ways we deal with different situations. So there are positive and negative ways. So we know that when it's positive it's more like a lot of mental... ja." (Participant 5)</i>
			Live through application of optimistic ways	<i>"Being able to apply positive things in your life and... ja, just, ja. Being at peace." (Participant 3)</i>
			Apply ethical behaviours when handling situations	<i>"The way I understand it, usually it incorporates in the subject of ethics in it. So the state of mental well-being, when we come across the situation. It might be a bad situation or a good situation, but how do you apply yourself to that situation in a professional manner. In most of the cases. Because most of the values that we display, it is the one that must go along with our profession. That's our understanding." (Participant 8)</i>

As evidenced in the FGDs, the majority of participants described mental well-being as the ability to maintain a balanced state of mind so that the mind is peaceful, positive and calm, even when one is faced with challenges. According to participants, mental well-being could be achieved through appropriately handling stressful situations in a peaceful way without disturbing other daily life activities and return to a balanced state of mind afterwards; through using engagement coping strategies; and through incorporating ethical behaviour or applying professionalism as a guide when faced with a difficult situation.

4.2.2 Major Theme 2: Reasons for choosing the VIHASA module

For the second major theme, participants offered various reasons for selecting the module. These include learning of personal, interpersonal, professional and team skills, as well as, skills for prevention of stress and burnout (see Table 4).

Table 4. Table of major theme 2

No.	Theme	Descriptions of theme	Quotations
2	Reasons for choosing the VIHASA module	Wanted to learn about themselves and their own personal values	<p><i>"I chose it to learn more about myself and more about my values and also because I wanted to be... I would say I was a very negative person. I wanted to be a very positive."</i> (Participant 5)</p> <p><i>"And the reason I chose this elective was because I wanted to be more aware of these values. Because I was embarrassed in first year when I... values, and I didn't know what to write. I had to go and take other people's values and I didn't know about my own values. So that's what embarrassed me a lot. So I came... So that's why I chose this, to learn more about those values, what they can do to me. What... can they help me?"</i> (Participant 11)</p>
		Wanted to learn values associated with healthcare	<i>"I want to explore more about these values in healthcare."</i> (Participant 8)
		For meditation and relaxation	<p><i>"I heard that we were going to meditate a lot and learn how to relax."</i> (Participant 9)</p> <p><i>"When I chose it I thought like, we're going to just sit and meditate the whole time. Like it was just about inner peace."</i> (Participant 4)</p> <p><i>"I thought we were just going to sit down and meditate."</i> (Participant 3)</p>

		<p>Hoping to learn some coping mechanisms when faced with stressful situations such as conflict and study stress</p>	<p><i>“As a practising medical professional to have a mechanism or a trick up your sleeve to just cope with that emotional stress and not experience burnout.” (Participant 6)</i></p> <p><i>“I chose this selective was because that last year I found it very difficult to cope with my studies.” (Participant 2)</i></p> <p><i>“What drew me to the module was the fact that they’re going to teach us how to cope with stressful situations. And everything that happens when you study.” (Participant 1)</i></p> <p><i>“When we had a paper and we were selecting... that it will help me in life.” (Participant 5)</i></p>
		<p>Preventive course for burnout which is commonly experienced by healthcare workers</p>	<p><i>“I know that healthcare workers often experience burnout because of the amount of emotional, not just physical, but the amount of emotional... withdrawal, if I can put it like that with patients. So I thought this would... doing this course would be a good way of finding ways to...Put yourself in a safe space” (Participant 6)</i></p>

Thus, the participants hoped to meet the following aims by choosing the VIHASA selective module: to learn more about themselves, their personal core beliefs and the core principles related to healthcare; to learn about meditation and relaxation; to learn as a coping strategy when dealing with stressful situations and to prevent burnout. Most of their reasons are in accordance with the focus of the VIHASA programme as stated in Parkes *et al.* (2010), which is to assist with the rediscovery of one's own values and develop ways of reflection in both personal and professional lives.

4.2.3 Major Theme 3: Experiences of the module

The participants described a range of different aspects of the module. These included positive experiences such as skill development, good emotions about the module and advantages over other selectives, as well as negative experiences such as the long duration and negative feelings about the long duration (Table 5).

Table 5. Table of major theme 3 and sub-themes

No.	Theme	Sub-themes	Descriptions of sub-theme	Quotations
3	Experiences of the module	Positive experiences	Rediscovered hidden skills	<i>“learned on how to calm myself down. Because there was an exercise that we do that I didn’t realize I can calm myself down. I didn’t realize... [unclear] I’ve got positivity. “ (Participant 4)</i> <i>“It has helped me to be more, like, positive. Like if we receive marks then I see, ok, eish I got a low mark. Then I become positive, and then that courage to study and study again. Believing that next time I’ll improve.” (Participant 7)</i>
			Developed new personal skills	<i>“It brought me to appreciate myself and to understand that as a human being”. (Participant 5)</i>
			Learnt self-care	<i>“the module that we did on valuing yourself. It also made an impact on changing your lifestyle and taking care of yourself. Not just always it’s others and others, and you’re at the bottom. So I’ve learned to take care of myself.” (Participant 1)</i> <i>“I think that can be used in so many walks of life. Not just professionally but personally.” (Participant 6)</i>

			Enjoyed being with people	<i>"But since I came here. Now, I'm around people. I enjoy being with people and everybody." (Participant 11)</i>
			Improved listening skills	<i>"I think I've seen a difference in the way I listen. I think I always... there's this guy in class who always said... in this selective, who always said, non-judgmental. Like that word always came out. So afterwards we went to the hospice, to the patients. So now I think I was not aware that I'll make faces. But Dr Maung always said, when you listen, don't. I think I always did. Maybe I don't know. So now I'm aware... So it has helped me in all situations. So that's the biggest thing for me that has come out." (Participant 4)</i>
			Improved communication skills	<i>"And you learned a lot how to communicate with others and you... ja, just everything was working very well." (Participant 9)</i>
			Improvement of attitudes (such as being non-judgemental)	<i>"Not judging others before you get to know them." (Participant 10)</i>
			Improvement of professional relationships with colleagues	<i>"Yes I'll just continue because it will make my life easy. I'll be able to work with other doctors when I'm working." (Participant 7)</i>
			Learnt lifelong skills	<i>"So I'll definitely be continuing. Especially with...you know, days are different. There are some days, after them you just have to recharge. You go back, you do meditation." (Participant 8)</i>

				<p><i>"But it is always a continuing... You have to continue improving. It's just not... it's not one module and then you're done." "So it will just make you a better person and if you continue using all these methods." (Participant 9)</i></p> <p><i>"Yes I'll just continue because it will make my life easy." (Participant 7)</i></p> <p><i>"everything we've learned in this selective... this module. None of it is like short term. I think all of it you can actually take it with you for, like, forever." (Participant 2)</i></p>
			Felt good emotions (such as fun, enjoyment, happiness, wonderful)	<p><i>"I really enjoyed that, it was very fun to do everything. The easiest why is just because it makes you much more happier, than if you don't use it." (Participant 9)</i></p> <p><i>"Yes, I would. It has done so many wonderful things in my life. It has taught me a lot." (Participant 10)</i></p>
			Advantages of this module as compared to other selectives: finishing the module earlier in the year and being in a small class	<p><i>"We're done before the other selectives though." (Participant 6)</i></p> <p><i>"you know, usually when we have blocks, like... we're fifty in a class." (Participant 3)</i></p> <p><i>"I think it was a very safe space to start discussing." (Participant 6)</i></p>

		Negative experiences	Duration of each session was too long	<p><i>“ four hours. Four, five, somewhere about four, five hours. We started around eleven. Ja, so that... it was quite long.” (Participant 6)</i></p> <p><i>“I felt like it was being allocated so much hours.” (Participant 8)</i></p>
			Negative feelings regarding the long duration of each session	<p><i>“And though... even though you’d go to relax, you still... it’s still... you’re still quite tired afterwards. Because it’s a different type of energy consumption, if I can put it like that.” (Participant 6)</i></p> <p><i>“So in those four hours we did like a whole four hours. There was no... you know when you attend class it’s an hour but you’re being taught for twenty minutes. The other forty minutes is just....” (Participant 4)</i></p>

Participants mentioned good experiences from the selective as they developed personal and interpersonal skills which may be used throughout their lives. The personal skills they improved on were appreciation, calming, confidence building, improving on own qualities, coping skills, concentration, application of professional attitudes and self-care. The interpersonal skills they developed were social skills such as communication, co-operation, listening skills and working in a team. Further, they reported that these were long-term skills and they would use them as a kind of mental recharging tool. Participants also believed that applying these skills could make them a better person and make their lives easier as they already felt fun, enjoyment and happiness regarding the module. Additionally, the earlier conclusion in the year and small class were good experiences as compared to other modules.

However, the participants made some complaints regarding their experiences of this selective module. These complaints revolved around the long duration of each session (a minimum of four hours), which resulted in the participants feeling tired, which reportedly caused negative emotion about the module.

4.2.4 Major Theme 4: Self-awareness

Participants were asked to reflect on their mental well-being prior to joining the module (before the module). Subsequently, they were asked to reflect on their mental well-being having attended the module (after the module). Therefore, participants mentioned their previous emotions, attitudes and behaviours towards themselves and others, or specific situations and how they changed after attending this module (see Table 6).

Table 6. Table of major theme 4 and sub-themes

No.	Theme	Sub-themes	Descriptions of sub-theme	Quotations
4	Self-awareness	Before the module	Negative towards themselves	<p><i>"Most of the time like, I was negative. Sometimes I was ignorant. Ja. That's what used to happen to me." (Participant 7)</i></p> <p><i>"Like her, I was a very negative person." (Participant 11)</i></p>
			Low self-esteem, lack of confidence, and a sense of hopelessness	<p><i>"Me, I never thought that anything good can happen to me. I always thought I was a waste of time and a waste of money. I was not confident at all. And... I'm trying not to cry." (Participant 5)</i></p> <p><i>"I felt like we have too much work. At times it would be like, let me just give up." (Participant 1)</i></p>
			Relation to others were negative, such as discomfort in a group and unwillingness to associate with people	<p><i>"For me, I think my biggest problem is, when it comes to group work. When it comes to being in a group I'm always like... the one that people always forget is there. I never like, give my input, I'm always scared that what if I... whatever I say is not right. Then people are going to say I'm stupid..." (Participant 2)</i></p> <p><i>"I didn't like to associate with other people. I didn't like that. So I always liked being alone. Even my mother always tells me that, I don't love people." (Participant 11)</i></p>

			Towards some stressful situations	<p><i>"If I was stressed I will just stress the whole day, not being able to study. When I would try to study it would be just a waste of time." (Participant 10)</i></p> <p><i>"before a test you can't focus on anything really. Your mind is at a hundred places." (Participant 9)</i></p>
		After the module	Improvement in self-care and appreciation for oneself	<p><i>"I wanted to say that for me it was... it also helped me take care of myself. There was a module we did, compassion. When I saw that I thought we were going to do like, how to be compassionate towards others. Then I find that it's very important to know how to be compassionate towards yourself. To know how to take care of yourself." (Participant 2)</i></p> <p><i>"It brought me to appreciate myself and to understand that as a human being." (Participant 5)</i></p>
			Improvement in social skills such as making friends	<p><i>"I think for me the module taught me a lot about becoming quiet. Um... sometimes it's like, especially after a test or a bad test or a bad experience. Then you sometimes... all the... if I say noise, it's not literal noise. But everything that's going on becomes quite overwhelming. So just to,</i></p>

				<i>almost go and sit and refocus yourself and then carry on from there.” (Participant 6)</i>
			Feeling of preparedness for handing difficult situations in an optimistic way	<p><i>“But with this module I felt like I’m coping. Anything that is thrown at me, if there is difficulty that is coming up, I will be able to cope with the stress and focus more on it.” (Participant 1)</i></p> <p><i>“Well, my attitude towards any situation or any problem at the moment, I could be more positive towards the problem. Whether it was studying of having to do a case study that has to be submitted for the next day, or... Normally I would just be negative towards it and maybe not do such a good work.” (Participant 9)</i></p> <p><i>“Especially with the rude patients. You know, patients can be rude. And escorts can be rude as well when you haven’t done anything....there was one where we did the coping mechanism on how to... If you are the one who’s angry because of the way the reacted to you. On how to... what to say to yourself to quiet yourself down. What to say to yourself.” (Participant 4).</i></p>

The findings around self-awareness showed that this selective module helped to develop all three branches of character traits that lead to well-being. The first is self-directedness, as students felt that they became more calm, more confident and accepting of themselves. The second trait is cooperativeness, and students reported learning how to work together successfully and how to build team spirit in non-competitive way. The third trait is self-transcendence. Students gained a clearer understanding of concepts such as intuition, the spirit and spirituality.

4.2.5 Major Theme 5: Recommendations

The participants were asked about what might be done to improve the module and they gave suggestions regarding implementation in different years of medical school and adjustments to the duration of each session (Table 7).

Table 7. Table of major theme 5 and sub-themes

No.	Theme	Sub-themes	Descriptions of sub-theme	Quotations
5	Recommendations	Duration of a session	Four hours	<i>"Everything was just perfect." (Participant 3)</i> <i>"Yes, I think it is already... I mean just the layout of the programme is already very well organised." (Participant 9)</i>
			Two hours	<i>"Then you start in January and you do two hours every Friday for the rest of the year. Ja." (Participant 6)</i> <i>"Unless you do it throughout the year." (Participant 4)</i> <i>"So to me what I can recommend is, it's either it goes to two hours, ja. If in that case they think they cannot cover the entire modules then they have to allocate more days for it." (Participant 8)</i>
		Year to implement the module	From first year onwards	<i>"I wish this shouldn't be a selective as it is now or third years only. I think maybe if it was for everyone and I wish or had an idea of what's happening. As a module, from first year level. Because in first year you encounter a lot of stress with registration, the adaptation and everything." (Participant 10)</i>

			From third year onwards	<p><i>“doing this course would be a good way of finding ways to... maybe if it’s not in third year but later on.” (Participant 6)</i></p> <p><i>“Maybe from third year going up.” (Participant 1)</i></p> <p><i>“maybe if it’s not in third year but later on.” (Participant 6)</i></p>
			At final year	<p><i>“So another recommendation I’m having. I think it would be nice if it can be for the final years.” (Participant 8)</i></p>
			All years	<p><i>“I wish this shouldn’t be a selective as it is now or third years only. I think maybe if it was for everyone and I wish or had an idea of what’s happening.” (Participant 10)</i></p>

Although there were some students who felt that the module should be kept the way it was delivered to them, some students recommended a reduction of the session time. In addition, many students felt that this module would be beneficial for all students throughout the different years of medical school training.

In summary, five major themes emerged from the analysis of qualitative FGD data, namely (i) Perspectives about mental well-being; (ii) Reasons for choosing the VIHASA module; (iii) Experiences of the module; (iv) Self-awareness; and (v) Recommendations. It should be noted that most of the major themes can be divided into two sub-themes, which emerged voluntarily from the participants during the FGDs. Although the researcher was specifically searching for ways in which the module enhanced the mental well-being of the participants, the findings also indicated that the students themselves reported many additional benefits.

4.3 WEMWBS questionnaires

The WEMWBS results of each participant were collected before and after attending the module. The total WEMWBS result of each individual participant is calculated by adding all 14 item scores. Baseline WEMWBS results showed the mental well-being score of each participant before they attended the VIHASA module and the final WEMWBS results represented their mental well-being after they attended the module. The baseline mean score, which is the average score of that group, was 46.9 and the final mean score was 61.4. According to Parkinson (2008), the provisional mean score of the adult Scottish population is 50.7 with a 95% confidence interval score of 50.3 to 51.1. Five students (45.4% of the group) scored below the mean score and six students scored above the mean score before attending the module. The baseline mean score of this group was 46.9, which is lower than the provisional mean score. The students in this group may be at risk for the consequences of burn-out and mental illnesses and may therefore benefit from proactive mental well-being programmes. The WEMWBS of all students were improved above the provisional mean score after they attended this selective module.

The comparison between the baseline and final WEMWBS results of each participant is represented in Table 8 and Figure 1.

Table 8. WEMWBS of participants

Participants' identified number	WEMWBS (before attending/ baseline)	WEMWBS (after attending/ final)
1	56	67
2	38	55
3	52	56
4	39	60
5	34	64
6	46	60
7	51	63
8	51	61
9	57	64
10	55	65
11	37	61
Mean score	46.9 (baseline)	61.4 (final)

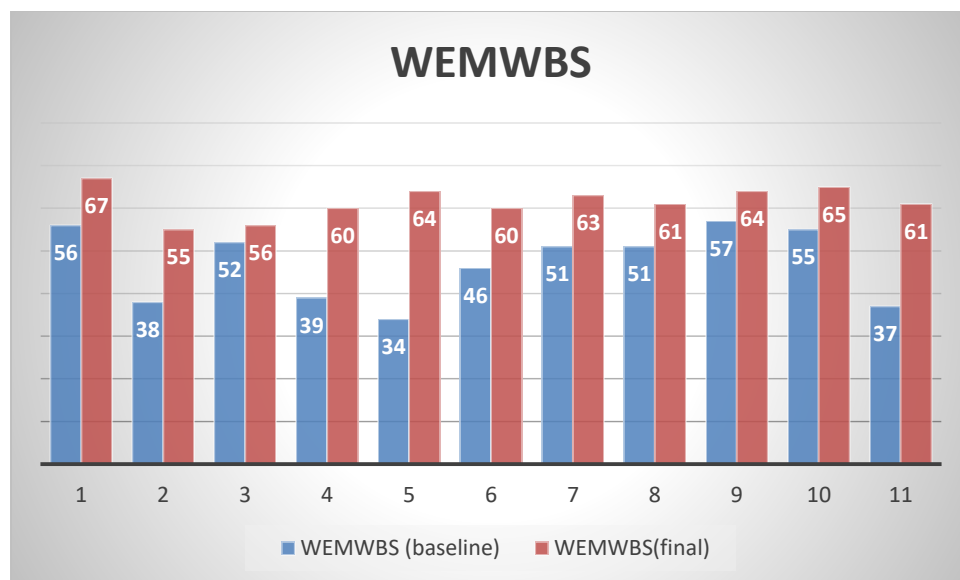


Figure 1. Comparison score of WEMWBS in each student before (baseline) and after (final) they attended the VIHASA selective

In conclusion of the quantitative data analysis, it clearly showed that the WEMWBS of all participants significantly improved after attending the module. No further comparisons were made between the scores due to the small sample size.

CHAPTER 5

DISCUSSION

This study explored the potential of the VIHASA selective module to enhance mental well-being of third year medical students at SMU. This chapter describes the strengths and limitations of the study and presents a discussion of the key findings that have emerged, comparing them to the existing literature.

5.1 Discussion of findings

The results of WEMWBS, as it covered both subjective well-being and psychological functioning of the participants, it also addressed various aspects of positive mental health, seem to suggest that there was an improved shift in terms of the mental well-being of participating students according to the measures that are used in this questionnaire. This supposition is supported in the data that emerged from the FGDs in a number of different ways. The key issues that emerged jointly from WEMWBS and FGDs are as follows:

A key factor that emerged from the analysis highlighted the extent to which the students' awareness of the concepts of mental well-being, and in fact their awareness of their own mental well-being, was increased. This is an important factor, since one could assume that it will result in the reduction of mental illnesses (Cloninger, Zohar & Cloninger, 2010), and it speaks to the value of a module that encourages students to engage with these issues. In addition, being aware of the engagement coping strategies that can be used to achieve mental well-being could lead to a reduced risk of developing mental illnesses. These engagement coping strategies include acceptance, problem solving and positive interpretation (Dyrbye *et al.*, 2005; Naidoo *et al.*, 2014).

The participating medical students demonstrated that they had developed knowledge of mental well-being and strategies to be used for achievement of mental well-being. Making students aware of these knowledge and skills could reduce psychological morbidity (Dyrbye *et al.*, 2005). All of these effects could be related to their involvement in the exercises of the VIHASA selective module such as coping better with stress and prevention of burnout.

Students were expecting mental preparation and relaxation activities when attending this module. This suggests that they felt the need to participate in a mental health promotional programme

either for preventive or curative purposes – possibly because they were already experiencing some measure of stress or anxiety and they had an impression that this VIHASA selective could meet their expectation of mental well-being. The baseline WEMWBS scores of some students were below the mean, which is the average score of that group, indicating that these students could be at risk of having mental illnesses. The selective attracted participants who were proactive enough to act on the demands they faced at medical school, however there may be other students who are reluctant to seek help and as medical students they are known to be resistant to help-seeking behaviour (Chew-Graham *et al.*, 2003). Therefore, this study highlighted that the participating students perceived the VIHASA selective to be a proactive mental well-being programme, which should also be made available to all students, so as to catch students who exhibit different help-seeking behaviours.

It is important to note that most students experienced good emotions such as fun and enjoyment regarding this selective module because, according to Votolato (2008), in order for a person to do well, she needs to spend time doing things that she enjoys. Therefore, the fact that students had fun during this selective module may be regarded as a strategy for the promotion of mental well-being.

Students appeared to perceive this module as a programme which focuses on personal development, since it heightened their self-knowledge and helped them to feel valued. The interpersonal component helped them to improve professional relationships with others, such as faculty members, patients and healthcare professionals. Medical students usually learn interpersonal skills through observational, situational and experiential participations through socialisation and role models during their training (Ssebunnya, 2013). Therefore, by being involved in this kind of value-laden module, students may benefit from learning skills that cannot easily be taught by the formal medical school curriculum. The development of peer support and the use of small group facilitation in this selective allowed student to feel that they were in a 'safe space' where they could express, analyse, and share their views, among each other. Therefore, the module provided various personal benefits that could help students to reduce common psychosocial stressors during their training.

Participation in this selective module seems to assist in the development of all three branches of character traits of students that are related to well-being. These include self-directedness, as students felt that they became more calm, more confident and accepting of themselves, skills that may have been gained from the 'peace' and 'valuing the self' sessions of the module; cooperativeness, as students learnt how to work together successfully and how to build team

spirit in non-competitive way during the 'co-operation' session; and self-transcendence, as students gained a clearer understanding concepts such as intuition, spirit and spirituality – topics that were discussed in the 'spirituality in healthcare' session. Since character development brings about greater self-awareness and hence greater happiness, it ultimately leads to an improvement of mental well-being (Cloniger, 2006). Therefore, this selective module could be of beneficial in developing three character traits that underlie well-being. The students' description of their emotions, attitudes to and behaviours in various situations suggests a shift from negative to positive after attending this selective module. This is also clearly evident in the WEMWBS, where the score of all participants improved significantly after attending the module. The baseline mean score of the study group was 46.9 improved to the final mean score of 61.4. These scores suggest that students have become more aware of their mental well-being due to participation in this VIHASA selective module, although this was short-term follow up measurement of mental well-being.

As the question of the most stressful year of medical training from the perspective of students is not the scope of this study, the reasoning in favor of the suggested implementation year was not explored. However, studies have found that the first 3 years of undergraduate medical studies are one of the most stressful times in medical school (Chew-Graham *et al.*, 2003; Hardeman, Przedworski, Burke, Burgess, Phelan, Dovidio & Nelson, 2015; Cuttilan *et al.*, 2016), and result in considerable signs of depression in medical students. In addition, most of the studies of the intervention programmes described in the literature were done in the first 3 years (Shiralkar *et al.*, 2013). Therefore, findings of this study together with the findings of above studies regarding timing of implementation of this selective suggest that it should be initiated any time from the first 3 years of medical training, with the aim of providing a proactive programme for mental well-being. Additionally, students in this study felt that the duration of two hours per session per week for 14 weeks was appropriate given their context and offered sufficient opportunity to explore aspects of personal and interpersonal skills development, and to learn skills from the programme. Finally, it is not known whether the participants in the intervention would sustain their mental well-being status throughout the rest of medical school, sporadic refresher sessions may be of benefit in this regard. However, although short-term or long-term follow up measurement of intervention programmes varies among different programmes, the participating medical students had significant positive health outcomes (Yusoff and Esa, 2012).

Interestingly, it may be noted that nothing emerged from the FGDs that suggested specific barriers regards to cultural backgrounds of the students while participating in the module. Given that there

is evidence of different cultures tending to be more reserved than others (Dyrbye, Thomas, Eacker, Harper, Stanford Massie, Power, Huschka, Novotny, Sloan & Shanafelt, 2007), this was unexpected and points to an area of further possible enquiry.

5.2 Strengths and limitations

This study is the first investigation into the perceptions of the medical students on the VIHASA programme. This work is supported through the utilization of a validated WEMWBS questionnaire. Additionally, the selected measurement time points enabled the effects of the selective to be assessed both before and after the intervention (see methodology chapter 3.5.2).

Given the small-scale nature of this study, there are some limitations. As participants were self-selected to enrol in the VIHASA selective and only eleven students enrolled, the study sample is small and possibly represents a particular type of student that is interested in this field. In addition, the voluntary nature of participation in this selective may attract those students who were more open to change. Thus, the researcher expected that this intervention would appeal to some medical students but not others.

Using WEMWBS questionnaire in South Africa context may affect the generalisability, since it was developed to measure mental well-being of adults in both students and general population in the UK with large sample size (Parkinson, 2008). Thus, the validity of the usage of WEMWBS questionnaire still needs to be confirmed, although the researcher used it in this research, she recognized these limitations. Further, the results of the differences between scores of the same participants before and after the intervention cannot be interpreted as significant due to small sample size. Therefore, a future study with larger sample size is recommended. Additionally, the sustainability of the participants' mental well-being status could not be known as the follow up duration of mental well-being measurement (final WEMWBS) was done only two weeks after the intervention. It may be worthwhile to consider investigating the duration of results in future research.

There were many advantages related to the researcher's dual role as the facilitator- researcher of this selective module. The advantages stem from the researcher's insider role and include obtaining permission to conduct the study, recruiting participants, defining the researcher's role to the participants, entering into the research site, arranging schedules for data collection and getting feedback from the participants for clarification and interpretation of transcripts (Unluer,

2012). There were also some disadvantages which were overcome with the help of several prevention measures. Namely, the researcher maintained a strictly professional level of contact with the participants, involved outsiders (focus group interviewer, transcriber and co-coder) in data collection and analysis processes and refrained from revealing sensitive information about the participants which were obtained from the FGDs.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

This study investigates the potential of the VIHASA selective module to enhance the perceptions of third year medical students about their mental well-being. A mixed methods approach was applied in order to enable the investigation of the issue from different perspectives and respond to the research question.

6.1 Conclusions

The findings from this study demonstrated that enhancement in mental well-being of medical students ultimately leads to an improvement of their mental well-being. Medical students' awareness of their mental well-being was also increased as they had developed knowledge and coping strategies through their participation in the VIHASA selective module. The students' expectation of mental preparation and relaxation was accomplished as they perceived this within the selective module.

Furthermore, I would argue that the VIHASA module is an essential module for medical students in which it emphasises self-care, personal development, and team development amongst medical students. The study suggests that all of these effects (both character and team development) bring greater self-awareness through self-directedness, co-operativeness, and self-transcendence, which leads to greater happiness and ultimately improved mental well-being. This is the first study of the VIHASA programme which focuses on mental well-being of medical students, and appears to address the need for a proactive intervention programme at SMU. It may reduce the risks and consequences of burn-out and mental illnesses in medical students.

As a third year medical curriculum in SMU, has a unique opportunity to equip students with beneficial skills which they could learn from the VIHASA selective, it could also safeguard the well-being of future doctors. As participants continued practicing the skills learnt from this selective, the sustainability of their mental well-being could be expected to be prolonged leading to decrease the mental distress and suicidal rate among physicians. The psychological distress in medical students could be prevented by implementing the preventive programme as "prevention is better than cure". This could also address the urgent need for implementation of

the mental health programme as an intervention in medical training globally. Perhaps this could be an imperative initiative of decreasing the enormous health burden of mental disability worldwide.

6.2 Recommendations

Implementing such programmes early in medical training may ingrain well-being strategies in medical students, which in turn may reduce the frequency and severity of burnout. This provides justification for the implementation of the VIHASA module to be delivered to as many students as possible, and therefore that it could be considered for incorporation in the medical school curriculum as compulsory for all students rather than a selective module from their first year at SMU. This could reduce the high rate of psychological distress usually found in the first year medical students at SMU as the VIHASA module serves as the proactive programme for mental well-being. When implementing such a programme in medical school, the duration and frequency of the sessions should take into account the students' academic schedules. Although this was not directly studied here, it is clearly of interest to examine the most effective programme in terms of duration and frequency. Therefore, medical curriculum designers should also be made aware of this kind of proactive programmes for promotion of well-being of medical students throughout their undergraduate medical training period.

Long term follow-up with students from this study may provide information about the sustainability of their mental well-being and the potential effects of this selective module on their academic outcomes. In addition, future research should extend to larger scale studies that include all students in different years of medical training at SMU, which could test the generalisability of the VIHASA programme. It is my hope that training medical students to focus on a personal and team development programme such as the VIHASA selective module may produce mentally well-balanced and well-adjusted doctors who may ultimately provide better patient care and service to the community.

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ADDENDUMS

Addendum 1: Preliminary questions used in focus group discussions

[These are preliminary questions serve as a guideline but they may change with what emerges from the WEMWBS questionnaire]

1. What do you understand the meaning of mental well-being?
2. Why did you choose to attend the 'Values in Healthcare' selective module?
3. How did you find this selective regarding improvement of your mental well-being?
4. What attitudinal and lifestyle changes did you make after attending this selective?
5. Would you continue to use in your life what you had learnt from this selective? Why?
6. Any recommendations to improve this selective on mental well-being?

Addendum 2: Timetable of the VIHASA module programme in SMU

[Adapted from Values in healthcare: a spiritual approach (2011)]

Introduction	30 mins
Exercises/ Activities	2hrs
Breaks (short)	15mins
Movement exercises	10mins
Session review	10mins
Action planning	30mins
Evaluation	10mins
Closure	5-10mins
Total session time	Approx 4 hours
Homework	

Addendum 3: Overview of the VIHASA selective module delivered at SMU

[Adapted from Values in healthcare: a spiritual approach (2011) and Eagger (2004)]

Topic of each session	Contents covered
Introductory session	Explanation of the structure, timetable and assessment of the module
Session 1: Values (gain strength through motivation)	Inner values (first half of session)
	Values at Medical school (second half of session)
Session 2: Peace (benefit from being calm)	Being peaceful (first half of session)
	Peace at Medical school (second half of session)
Session 3: Positivity (harness the power of thoughts)	Being positive (first half of session)
	Positive interaction (second half of session)
Session 4: Compassion (release healing energy)	Finding compassion (first half of session)
	Compassion in practice (second half of session)
Session 5: Co-operation (appreciate the wisdom of teams)	Understanding co-operation (first half of session)
	Working in teams (second half of session)
Session 6: Valuing yourself (sustaining the carer)	Self-care (first half of session)
	Self-esteem (second half of session)
Session 7: Spirituality in healthcare (spiritual care in practice)	Exploring spirituality and healing (first half of session)
	Spiritual care in practice (second half of session)

Addendum 4: Brief description of the VIHASA topics and learning tools

[Adapted from Values in healthcare: a spiritual approach (2011)]

VIHASA topics:

(Introductory session) In this session, participants are explained about the structure, timetable and assessment of the module and distributed meditation calendar, CD and reflective diary to each student.

(Session 1: Values) Identifying and experiencing core values which guide their personal lives, the *Values in Healthcare* module gives participants the opportunity of exploring in depth some values which are of particular importance in healthcare practice. These are briefly described below.

(Session 2: Peace) Peace is introduced as our natural state, i.e. that within all of us there is an innate core of calm and tranquillity. The session uses simple but powerful ways to rediscover this inner peace. By practising peacefulness, participants can access their positive qualities, which help to build self-respect and contentment. Peacefulness is the medicine for 'burnout'.

(Session 3: Positivity) Positivity is about having the choice and power to change the way people think. Health care professionals can often think critically or even negatively out of habit, whereas positive thoughts make people feel good. The session helps participants to recognise unhelpful patterns of thinking and change them to more positive ones by learning to observe their thoughts. Their resulting positivity and optimism brings benefits not only to themselves, but to colleagues and patients.

(Session 4: Compassion) It brings humanity to health care. It is the expression of our innate qualities of patience, generosity and kindness, yet there are often personal barriers to its expression – anger, anxiety, guilt and attachments. The session helps participants to acknowledge and tackle these barriers and to view compassion as a value they can consciously express throughout their practice.

(Session 5: Co-operation) It is about working together successfully, as individuals and teams. The session helps participants to gain an understanding of the thoughts, attitudes, feelings and behaviour which enable successful co-operation. It enables them to build team spirit in non-competitive ways, so that tasks become enjoyable and creative.

(Session 6: Valuing the self) It requires that people recognise our own worth, and in doing so, can better acknowledge the intrinsic worth of others. Participants explore the question of 'who am I?' in the context of how they look after themselves. This can help them to bring mutual respect and harmony into their relationships, to the benefit of themselves, their patients and colleagues.

(Session 7: Spirituality in health care) It is a vital concept in furthering the ideals of holistic health and spiritual care. The session involves participants in clarifying concepts of healing, spirit and spirituality, in order to further develop their values-based practice.

Learning tools

Meditation in this session involves participants in being silent and using the time to learn about their mind and their thoughts. By using positive and peaceful thoughts participants can experience quietening their minds, moving towards the silent centre of their consciousness, and bringing calm to their work.

Visualisation involves using the mind to create positive images which can help to address past negative experiences and associated feelings of failure or frustration. Visualisation exercises can help to build participants' self-respect and positive attitudes.

Reflection is much used within healthcare training. 'Reflective practice' involves learning from past experience to review professional progress, evaluate concerns and improve clinical practice. The spiritual approach to reflection involves participants in taking a detached view - looking at themselves from outside, so that they can examine their own emotional reactions. From a place of calm and peacefulness, it enables them to understand and release feelings of anger, anxiety and attachment, learn from mistakes and build on positive experiences.

Listening is an essential skill in health care, and the quality of how we listen can bring benefit not only to those being listened to, but to the listener themselves. Listening as a spiritual tool involves participants in deep listening and requires that the listener finds inner peacefulness, so that they can give their full attention, focusing on what the person is saying with an open heart and without judgement.

Appreciation is an essential skill when dealing with many aspects of patient care, interaction with colleagues, and personal lives. As a spiritual skill, it looks at individuals and groups from the perspective of valuing what works best, drawing on existing skills and shared values to seek solutions, rather than focusing on the problem and apportioning blame.

In healthcare the emphasis is often on developing a critical attitude. While this is essential in the technical side of medical care, practising appreciation can help participants to recognise the value of the human contribution and to encourage co-operation between colleagues and within teams.

Creativity encourages the discovery of new solutions. As a spiritual skill it emphasises the premise that ideas come to us when we give ourselves silent space and drop our preconceptions.

As part of the “Values in Healthcare programme”, participants are encouraged to experience the creativity which can flow through drawing, writing poetry, and visualisation. Facilitators are encouraged to experiment with activities which explore values in creative ways. For all, the sessions may involve taking risks by behaving outside our normal roles. However, the experience of heightened creativity and its application to problem solving will be a positive learning outcome.

Playfulness introduces the idea that it is legitimate to experience fun and laughter as part of the learning process. Being playful is being spontaneous and carefree, with a willingness to let go of barriers and overcome difficulties. While participants may feel inhibited at first, the playing of simple games can be a moving experience, connecting people at a deeper level and allowing everyone to ‘just be themselves’. Having a sense of ‘lightness’ in our manner encourages tolerance in our listening and softness in our judgements.

Addendum 5: Assessment methods used in the VIHASA selective module

Both formative and summative assessment methods were used in this module. Formative assessment contributed to the 60% of the final mark as follows:

- 50% of the mark for class attendance
- 25% of the mark for participation in the activities (such as team work & homework)
- 25% of the mark for practising meditation (weekly proof of meditation)

Summative assessment contributed the remaining 40% of the final mark as follows:

- 50% of the mark for reflective essay submission (individual work)
- 50% of the mark for presentation of Poster on 'Values in Healthcare' (group work)

Addendum 6: Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5
I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

"Warwick Edinburgh Mental Well-Being Scale (WEMWBS)
 © NHS Health Scotland, University of Warwick and University of Edinburgh,
 2006, all rights reserved."

Addendum 7: Approval Notice from HREC - 2



UNIVERSITEIT STELLENBOSCH-UNIVERSITY
Jou kennisvennoot - your knowledge partner

Approval Notice Response to Modifications- (New Application)

04-Feb-2016
Tin Maung Maung, Yamin Y

Ethics Reference #: S15/10/241

Title: Third year medical students' perceptions of the 'Values in healthcare' selective module on their mental well-being: A Pilot Study from Sefako Makgatho Health Sciences University (SMU).

Dear Dr Yamin Tin Maung Maung,

The *Response to Modifications - (New Application)* received on 18-Jan-2016, was reviewed by members of Health Research Ethics Committee 2 via Expedited review procedures on 02-Feb-2016 and was approved.

Please note the following information about your approved research protocol:

Protocol Approval Period: 04-Feb-2016 -03-Feb-2017

Please remember to use your **protocol number** (S15/10/241) on any documents or correspondence with the HREC concerning your research protocol.

Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:

Please note a template of the progress report is obtainable on www.sun.ac.za/rds and should be submitted to the Committee before the year has expired. The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Translation of the consent document to the language applicable to the study participants should be submitted.

Federal Wide Assurance Number: 00001372

Institutional Review Board (IRB) Number: IRB0005239

The Health Research Ethics Committee complies with the SA National Health Act No.61 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 Part 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Contact persons are Ms Claudette Abrahams at Western Cape Department of Health (healthres@pgwc.gov.za Tel: +27 21 483 9907) and Dr Helene Visser at City Health (Helene.Visser@capetown.gov.za Tel:

Addendum 8: Approval from SMUREC



Dr Y Tin Maung Maung
Practice of Medicine
P.O. Box 525
MEDUNSA
0204

Dear Dr Y Tin Maung Maung

RE: DRY TIN MAUNG MAUNG - REQUEST PERMISSION TO CONDUCT A STUDY AT SMU

SMUREC NOTED a letter dated 8 February 2016 requesting permission to conduct a research study at Sefako Makgatho Health Sciences University


Study Title:	Third medical students' perception of the 'values in healthcare' selective module on their mental well-being: A Pilot study from Sefako Makgatho Health Sciences University
Researcher:	Dr Y Tin Maung Maung
University:	University of Stellenbosch
Qualification	MPhil (Health Professions Education)
Ethics Reference No:	S15/10/241
Approval letter date:	04 February 2016

SMUREC **APPROVED** and **GRANTED** the researcher permission to conduct the above mentioned study at Sefako Makgatho Health Sciences University

Yours Sincerely,


DR C BAKER
DEPUTY CHAIRPERSON SMUREC

02 March 2016


**SEFAKO MAKGATHO
HEALTH SCIENCES UNIVERSITY**
SMU Research Ethics Committee
Chairperson
Date: 02/03/2016

Addendum 9: Permission to use WEMWBS

no-reply@warwick.ac.uk

8:27 PM (1 minute ago)

to

me

Thank you for completing this registration. You now have permission to use WEMWBS in the manner detailed in your submission shown below:

Question: Name:

Answer:

Yamin Tin Maung Maung

Question: Email address:

Answer:

yamintinmaungmaung@gmail.com

Question: Institution/Organisation

Answer:

Sefako Makgatho Health Sciences University, South Africa

Question: Name:

Answer:

Question: Email address:

Answer:

Question: Institution/Organisation

Answer:

Question: Type of Study

Answer:

Intervention study (WEMWBS before and after)

Question: Description of proposed project:

(For translations, please state the language concerned)

Answer:

The study is based on the intervention programme called 'Values in healthcare' that may enhance the medical students' awareness of mental well-being

Question: Description of participants

Answer:

Third year medical students studying at Sefako Makgatho Health Sciences University

Question: Location

Answer:

Sefako Makgatho Health Sciences University, South Africa

Question: Gender

Answer:

Male and Female

Question: Ages

Answer:

18 to 40 years

Question: Approximate Start Date

Answer:

26/02/2016

Question: WEMWBS version

Answer:

14 items

Question: Expected number of people to be studied

Answer:

15

Question: Other information as relevant

Answer:

The title of the study is Third year medical students' perceptions of the "Values in healthcare" selective module on their mental well-being

Question: Are you willing for us to share top level details of your research

Answer:

No

Website address <http://www2.warwick.ac.uk/fac/med/research/platform/wemwbs/>

Addendum 10: Participant information leaflet and consent form

TITLE OF THE RESEARCH PROJECT:

Third year medical students' perceptions of the "Values in healthcare" selective module on their mental well-being: A Pilot Study from Sefako Makgatho Health Sciences University (SMU)

REFERENCE NUMBER: S15/10/241

PRINCIPAL INVESTIGATOR: Dr Y Tin Maung Maung

ADDRESS: Practice of Medicine

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PO Box 625

MEDUNSA 0204

CONTACT NUMBER: 012 521 4383

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the study staff or doctor any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is entirely voluntary and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the Sefako Makgatho University Research Ethics Committee (SMUREC) and the Health Research Ethics Committee at Stellenbosch University and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

What is this research study all about?

This study will investigate the perceptions of the third year medical students regarding the selective module "Values in healthcare". The objectives of the study are were to obtain a deeper understanding of the students' experience of the module and how it related to their own mental

well-being, and to provide recommendations with regard to future curriculum planning in terms of improving the mental well-being of medical students.

The methods of the study used are the following:

- ☐ To assess the baseline (before intervention) mental well-being of the medical students by using a validated assessment tool: The Warwick-Edinburgh Mental Well-being Scale (WEMWBS).
- ☐ To assess the final (after intervention) mental well-being of the medical students by using the same validated assessment tool (WEMWBS).
- ☐ To compare the baseline and final score of WEMWBS.
- ☐ To conduct focus group interviews with the medical students after they have attended the selective module.
- ☐ To provide recommendations to medical students on improving their mental well-being with regards to “Values in healthcare” selective module.

Before and after attending the selective, the participants will have to complete questionnaire of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). Additionally after attending the selective, this study will allocate participants into different focus groups for interview. All interviews will be audio-taped. The results of this study will be used to discuss at the Academic Planning and Curriculum Development Committee (APCDC) of the third year MBChB programme.

Why have you been invited to participate?

- ☐ You have been invited to participate in this research as you chose to attend the selective module of “Values in healthcare” in 2016.

What will your responsibilities be?

- a) Responsibilities of the participants during the “Values in Healthcare” selective are: compulsory attendance of all sessions (duration of each session is four hours); participation in the activities such as meditation, visualization, reflection, listening, creativity exercises and games playing; practicing self-meditation weekly throughout the module; and recording what they have learned or been inspired by, in their diaries after each session.
- b) In the discussions group, participants have to participate actively in the discussion, share their views regarding the effects of this selective module on their mental well-being and make recommendations for improvement. This process will be facilitated by the interviewer.

- c) Participants will also have to respond to a questionnaire of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) on mental well-being.

Will you benefit from taking part in this research?

- ☐ You might benefit in improvement of mental well-being due to the intervention of the selective but you might not benefit directly from this research. It is envisaged that the findings of this study will benefit future medical students in SMU if APCDC accept the incorporation of the selective as a compulsory program.

Are there in risks involved in your taking part in this research?

- ☐ None

If you do not agree to take part, what alternatives do you have?

- ☐ There are no implications for those who decide not to participate and you do not need to follow any alternatives.

Who will have access to your medical records?

- ☐ N/A

What will happen in the unlikely event of some form injury occurring as a direct result of your taking part in this research study?

- ☐ N/A

Will you be paid to take part in this study and are there any costs involved?

- ☐ You will not be paid to participate in this study and there will be no costs involved for you if you do take part.

Is there anything else that you should know or do?

- ☐ You can contact the Health Research Ethics Committee at 021-938 9207 or Sefako Makgatho University Research Ethics Committee if you have any concerns or complaints that have not been adequately addressed by your study leader.
- ☐ You will receive a copy of this information and consent form for your own records.

Declaration by participant

By signing below, I agree to take part in a research study entitled (Third year medical students' perceptions of the "Values in healthcare" selective module on their mental well-being: A Pilot Study from Sefako Makgatho Health Sciences University (SMU).

I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (place) on (date) 2016.

Signature of participant

Signature of witness

Declaration by investigator

I (name) declare that:

- I explained the information in this document to

- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use an interpreter. (If an interpreter is used then the interpreter must sign the declaration below.

Signed at (place) on (date) 2016.